

REMARKS

The application has been amended to more particularly point out and distinctly claim the subject matter that Applicants regard as the invention so as to place the application, as a whole, into a *prima facie* condition for allowance. Great care has been taken to avoid the introduction of new subject matter into the application as a result of the foregoing modifications.

Claims 1-26 are pending in the present application. By way of the foregoing, Claims 1, 11, 12, and 23-25 have been amended to more particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Specifically, the claims have been amended to identify the substantially elliptical motion of the claimed invention in more than one axis, as well as its ability to move about an additionally second horizontal axis perpendicular and additionally about the vertically disposed axis. Support for the claim amendments is found throughout the specification, the figures, and originally filed claims, and thus no new matter is added.

I. Claim Rejections under 35 U.S.C. § 102

In rejecting Claims 1-6 and 8 under 35 U.S.C. § 102(e) as being anticipated by Gautsch et al., the Examiner points out that Gautsch et al. disclose a process and apparatus for treating materials in containers including vibrating containers to provide for a horizontal and vertical movement of the containers. To support this point, the Examiner references Figures 1-4 of Gautsch et al. The apparatus of Gautsch et al. teaches a disruption device for fracturing tissues and cell walls by mechanically reciprocating a container of tissue and liquid medium to elicit the release of the components of the tissues and cells, and in particular, release of nucleic acid molecules, into the liquid medium. However, Gautsch et al. do not disclose or teach a process or

device for that macerates solid materials by the disruption caused by the simultaneous vertical and horizontal oscillating movement of the device, and therefore, Applicants disagree with the present ground of rejection under Section 102.

The present claimed invention, in contrast to Gautsch et al., claims a device for macerating solid material through the simultaneous vertical and horizontal oscillating movement of the device. Clearly, Gautsch et al. do not teach or suggest pulverization of materials through the simultaneous vertical and horizontal oscillating movement of the device. In contrast, Gautsch et al. teach the preservation of products released from the cell and into the liquid medium during disruption. The present claimed invention requires that the sample material is processed by the simultaneous vertical and horizontal oscillating movement of the device. Accordingly, Gautsch et al. cannot support a rejection of the present claimed invention under 35 U.S.C. § 102(e) and Applicant respectfully requests withdrawal of the rejections based on the same.

The Court of Appeals for the Federal Circuit ("CAFC") and its predecessor court have had numerous opportunities to interpret the statutory language of 35 U.S.C. § 102. Issues relating to the anticipatory nature of prior art under Section 102 are therefore resolved by applying the precedent established and adopted by the CAFC. In terms of identifying what anticipation is, the court has stated that, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In terms of identifying what an anticipating reference is, the court has stated that, "[t]o be prior art under section 102 the reference must put the anticipatory subject matter at issue into the possession of the public through an enabling disclosure." *Chester v. Miller*, 15 USPQ2d 1333, 1336 n.2 (Fed. Cir. 1990). In other words, "[a] reference cannot anticipate that

which it does not enable." *University of California v. Eli Lilly and Co.*, 39 USPQ2d 1225, 1242 (S.D. Ind. 1995), *aff'd*, 43 USPQ2d 1398 (Fed. Cir. 1997), *cert. denied*, 118 S. Ct. 1548 (1998).

By applying the above-stated CAFC rules for interpreting prior art under 102, it becomes evident that the Gautsch et al. reference cannot stand as an anticipating prior art reference. First, each and every element as set forth in Claims 1-6 and 8 is not found, either expressly or inherently, in the Gautsch et al. reference. *Verdegaal Bros.*, 2 USPQ2d at 1053. Gautsch et al. teach a disruption device for fracturing tissues and cell walls by mechanically reciprocating a container of tissue and liquid medium to elicit the release of the components of the tissues and cells, and in particular, the release of nucleic acids, into the liquid medium. [Gautsch et al., Column 2, Lines 8-20]. Gautsch et al. do not teach or suggest pulverization of materials by invoking elliptical movement about two horizontal axes and further about a vertical axis. Despite the Examiner's assertion that the teachings of Gautsch et al. anticipate the methods of Claims 1-6 and 8, such a statement does not satisfy the "inherent" or "express" quality of an anticipating disclosure as required by the CAFC. *Verdegaal Bros.*, 2 USPQ2d at 1053.

The foregoing amendment to the claims further distinguishes Applicant's invention from that disclosed in the prior art so as to place the present application in a condition whereby it is not anticipated by Gautsch et al. Furthermore, Gautsch et al. is a reference that cannot anticipate Claims 1-6 and 8 because Gautsch et al. cannot anticipate that which it does not enable. *University of California*, 39 USPQ2d at 1242. While Gautsch et al. do teach a disruption device for fracturing tissues and cell walls by mechanically reciprocating a container of tissue and liquid medium to elicit the release of the components of the tissues and cells into the liquid medium, Gautsch et al. do not disclose or teach a process or device for macerating solid material through the

simultaneous vertical and horizontal oscillating movement of the device. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claims 1-6 and 8 under 35 U.S.C. § 102(e).

II. Claim Rejections under 35 U.S.C. § 103

Claims 25 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Moore et al. Applicants respectfully disagree with this ground of rejection and submit that Moore et al. does not render obvious Applicants' invention. The Examiner points out that Moore et al. disclose the basic process steps of treating material in sample containers by rapidly moving the containers in both horizontal and vertical directions within an arcuate flow path. According the Examiner, adding to the number of containers used within the process of Moore et al. and the means to support additional containers would have been obvious to one of ordinary skill in the art. Moreover, the apparatus of Moore et al. teaches an agitation device for breaking bacterial cells while dissipating heat to prevent the destruction of proteins and enzymes released during cell agitation. However, Moore et al. do not disclose or teach a process or device for macerating solid material by invoking movement about two horizontal axes and further movement about a vertical axis.

The present claimed invention, in contrast to Moore et al., claims a device for macerating solid material by invoking movement about two horizontal axes and further movement about a vertical axis. Furthermore, the present claimed invention adds the limitation of an elliptical movement about two horizontal axes. Clearly, Moore et al. do not teach or suggest pulverization of materials by invoking elliptical movement about two horizontal axes and further movement about a vertical axis. In contrast, Moore et al. teach the preservation of products released from the cell during agitation. The present

claimed invention requires that sample material processed by invoking elliptical movement about two horizontal axes and further movement about a vertical axis.

While Moore et al. do teach an agitation device for breaking bacterial cells while dissipating heat to prevent the destruction of proteins and enzymes released during the cell agitation, Moore et al. do not disclose or teach a process or device for macerating solid material by invoking elliptical movement about two horizontal axes and further movement about a vertical axis. Accordingly, Moore et al. cannot support a rejection of the present claimed invention under 35 U.S.C. § 103(a) and Applicants respectfully request withdrawal of the rejections based on the same.

The Examiner next rejected Claims 7 and 9-26 under 35 U.S.C. § 103(a) as being unpatentable over Gautsch et al. Applicants respectfully disagree with this ground of rejection and submit that Gautsch et al. does not render obvious Applicants' invention. The Examiner points out that Applicants' invention is merely a collection of design choices made in modification of Gautsch et al. The apparatus of Gautsch et al. teaches a disruption device for fracturing tissues and cell walls by mechanically reciprocating a container of tissue and liquid medium to elicit the release of the components of the tissues and cells, and in particular, the release of nucleic acid molecules, into the liquid medium. However, Gautsch et al. do not disclose or teach a process or device for macerating solid material by invoking movement about two horizontal axes and further movement about a vertical axis.

The present claimed invention, in contrast to Gautsch et al., claims a device for macerating solid material by invoking movement about two horizontal axes and further movement about a vertical axis. Furthermore, the present claimed invention adds the limitation of pulverizing solid sample material by invoking elliptical movement about two horizontal axes. Clearly, Gautsch et al. do not teach or suggest pulverization of

materials by invoking elliptical movement about two horizontal axes and further movement about a vertical axis. In contrast, Gautsch et al. teach the preservation of products released from the cell during disruption. The present claimed invention requires that sample material processing by invoking elliptical movement about two horizontal axes and further movement about a vertical axis.

While Gautsch et al. do teach a disruption device for fracturing tissues and cell walls by mechanically reciprocating a container of tissue and liquid medium to elicit the release of the components of the tissues and cells, and in particular, the release of nucleic acids into the liquid medium, Gautsch et al. do not disclose or teach a process or device for macerating solid material by invoking elliptical movement about two horizontal axes and further movement about a vertical axis. Accordingly, Gautsch et al. cannot support a rejection of the present claimed invention under 35 U.S.C. § 103(a) and Applicants respectfully request withdrawal of the rejections based on the same.

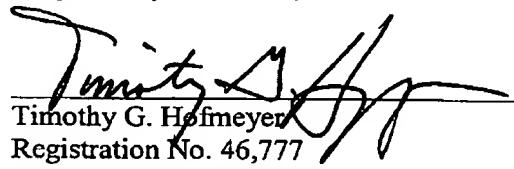
Accordingly, the purpose of the claimed invention is not taught or suggested by the cited references, nor is there any suggestion or teaching that would lead one skilled in the relevant art to combine references in a manner that would meet the purpose of the claimed invention. Because the cited references, whether considered alone, or in combination with others, do not teach or suggest the purpose of the claimed invention, Applicants respectfully submit that the claimed invention, as amended, patentably distinguishes over the prior art, including the prior art cited merely of record.

Based on the foregoing, Applicants respectfully submit that Claims 1-26, as amended, are in condition for allowance at this time, patentably distinguishing over the cited prior art. Accordingly, reconsideration of the application and passage to allowance are respectfully solicited.

In the event the present claims are not deemed adequate for their intended purpose, the Examiner is respectfully urged to telephone the undersigned attorney at (919) 425-3000 to discuss the claims in an effort to reach mutual agreement with respect to claim limitations in the present application which will be effective to define the patentable subject matter.

Respectfully submitted,

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